

*Q1*  
*Q2*

~~the raster of a second resolution, [whereby] comprising the steps of:~~

~~(a) scaling the digital source data [are scaled] by at least one scaling factor [(sx, sy)],;~~

5 ~~(b) allocating a target image matrix to each of the digital source datum [(1, 7, 7', 23, 33, 42) has a target image matrix (26, 27, 28, 29, 53, 54, 55, 56) allocated to it] on a [the] basis of a surround window [(52a, 52b, 52c, 52d)] surrounding the source pixel and determining the digital target data [are determined] from neighboring target image matrices [(26, 27, 28, 29, 53, 54, 55, 56)] such that each target pixel is directly formed from a source pixel taking the surroundings thereof into consideration,~~

10 ~~(c) using each digital source datum [is employed] for smoothing the target data to be determined from all neighboring source data, and~~

15 ~~(d) implementing [the] scaling and [the] smoothing [are implemented] such in a common processing step that~~

~~(d1) the target data are smoothed in the raster [(23', 23'')] of the source data [(1, 7, 7', 23, 33, 42)].~~

20 ~~2.(Amended) A method [Method] according to claim 1, further comprising the step of: [whereby]~~

~~superimposing neighboring target image matrices [(26, 27, 28, 29, 53, 54, 55, 56)] [are superimposed] on one another for determining the target data or are joined without overlap.~~

25 ~~3.(Amended) A method [Method] for converting digital source data in a [the] raster of a first resolution into digital target data in a [the] raster of a second resolution, [whereby] comprising the steps of:~~

*a2*  
5 (a) scaling and smoothing the digital source data [are scaled] by a  
scaling factor [(sx, sy) and are smoothed,];

10 (b1) selecting a scaling rule [is prescribed] from a plurality of selectable  
scaling rules,

15 (b2) selecting a smoothing rule [is prescribed] from a plurality of  
smoothing rules,

20 (c) forming a single scaling and smoothing rule [is formed] from the  
selected scaling rule and the selected smoothing rule, both a smoothing of the  
digital target data in the raster [(23', 23'')] of the digital source data [(1, 7, 7', 23,  
33, 42)] as well as a scaling ensuing in respectively one processing step with said  
single scaling and smoothing rule during [the] formation of the target data,

25 (c1) allocating a target image matrix to each source datum [(1, 7, 7', 23,  
33, 42) has a target image matrix (26, 27, 28, 29, 53, 54, 55, 56) allocated to it]  
on a [the] basis of a surround window [(52a, 52b, 52c, 52d)] surrounding the  
digital source pixel and determining the digital target data [are determined] from  
neighboring target image matrices [(26, 27, 28, 29, 53, 54, 55, 56)] such that each  
target pixel is directly formed from a source pixel taking the surroundings thereof  
into consideration,

30 (d) using each source datum [is employed] for smoothing the target  
data to be determined from all neighboring source data.

4.(Amended) A method [Method] according to claim 3, further  
comprising the step of: [whereby]  
selecting the scaling rule [is prescribed] from a plurality of scaling rules.

25 5.(Amended) A method [Method] according to claim 3 [or claim 4],  
further comprising the step of: [whereby]

selecting the smoothing rule [is prescribed] from a plurality of smoothing rules.

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6.(Amended) A method [Method] according to claim [one of the claims] 4 [or 5], wherein [whereby] the selecting [prescription] of the scaling rule [and/or of the smoothing rule] ensues on a [the] basis of a print job.

5 7.(Amended) A method [Method] according to claim 6, further comprising the step of: [whereby] using different smoothing rules [are employed] region-by-region within the print job.

10 8.(Amended) A method [Method] according to claim [one of the claims] 1 [through 7], wherein [whereby] the scaling factor [(sx, sy)] has a fractional value.

9.(Amended) A method [Method] according to claim [one of the claims] 1 [through 8], wherein [whereby] the scaling and the smoothing ensue in a common work step.

15 10.(Amended) A method [Method] according to claim 1 [one of the preceding claims], wherein [whereby] the scaling and smoothing steps include generating [ensue in that] a respective index [(49)] allocated to the target image matrix [(26, 27, 28, 29, 53, 54, 55, 56) is generated] from the source data [(1, 7, 7', 23, 42)] individually pixel-by-pixel, the target data [(8, 10, 24, 30, 47)] being determined with said index.

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~~11.(Amended) A method [Method] according to claim 10, further comprising the step of: [characterized in that] using the index [(49) is employed] for addressing a look-up table [(51)] that contains the target data.~~

5 ~~12.(Amended) A method [Method] according to claim 10, further comprising the step of: [whereby] using the index as [(49) is employed in the form of] an index signal for driving an electronic circuit [(51)] that forms the target data [(8, 10, 24, 30, 47)] from the index signals.~~

10 ~~13.(Amended) A method [Method] according to claim [one of the claims] 10 [through 12], further comprising the steps of: [whereby] storing the source data [(33) are stored] byte-by-byte in a shift register [(37)], shifting [whereby] an interrelated group of data [(36, 36') are respectively shifted] in the shift register [(37)] with each processing clock, as a result whereof the index [(49)] is formed from bits of the shift register [(37)] lying next to one another after the shifting of all data of the group.~~

15 ~~14.(Amended) A method [Method] according to claim 1 [one of the preceding claims], wherein [whereby] the shift register [(37)] is filled according to the following rules with every processing clock:~~

20 (a) R0 through R(A-1) remain unaffected and  
(b)  $R(i+A) = q(i/Qy, Qy - 1 - (i \% Qy))$  and  
 $R(i+A) = q(i/Qy, i \% Qy),$

*whereby the following applies:*

Ri: *value of the ith register bit*

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Qx: ~~window width in x-direction~~

Qy: ~~window width in x-direction~~

q(k,l): ~~value of the source pixel having the position (k, l)~~

/: ~~integer division~~

5 %: ~~modulo division and~~

A = Qy \* (Qx - 1).

15.(Amended) A method [Method] according to claim 1 [one of the preceding claims], wherein [whereby] pixel data belonging to images are processed as the digital source data [(1, 7, 7', 23, 33, 42)].

16.(Amended) A method [Method] according to claim 1 [one of the preceding claims], further comprising the steps of: [whereby] processing excerpts of the image having 1 x m source pixels [are respectively processed] in common as a window; [in that] forming target image matrices each respectively having n x p target pixels [are formed] from each source pixel window; and [in that] depositing the target pixels of neighboring target pixel matrices [are deposited] in a memory next to one another or overlapped.

17.(Amended) A method [Method] according to claim 16, wherein [whereby] neighboring target image matrices are overlapped with an OR-operation.

18.(Amended) A method [Method] according to claim 17, wherein [whereby] the source pixel windows each respectively comprise 3 x 3 pixels for scaling factors Sfx = Sfy = 2.5; [in that] and further comprising the steps of:

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forming exactly one target image matrix having 3 x 3 target pixels [is formed] from each source pixel window; and [in that] forming exactly 5 x 5 target pixels [are formed] from respectively four target image matrices by an OR-operation.

5            19.(Amended) A method [Method] according to claim 1 [one of the preceding claims], further comprising the step of: [whereby] allocating a grayscale value [is allocated] to each source pixel.

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10            20. (Amended) A method [Method] according to claim 19, wherein at least one of [whereby] a scaling and [/or] smoothing ensues in the grayscale value raster.

15            21.(Amended) A method [Method] according to claim 1 [one of the preceding claims], further comprising the step of: [whereby] allocating a color value [is allocated] to each source pixel.

20            22.(Amended) A method [Method] according to claim 19, wherein at least one of [whereby] a scaling and [/or] smoothing ensues in the color value raster.

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Add new claim 23 as follows:

20            23. A method according to claim 5, wherein the selecting of the smoothing rule ensues on a basis of a print job.